10 November 1982

Key Points

A. Prospects to 1990

1. At a real oil price of over $30/B (in 1982 $'s), OPEC'S production will decline greatly by 1990, e.g., by 30% from about 20 million B/D to around 14 million B/D. Its oil revenues would fall by about the same proportion.

   a. OPEC oil consumption would be level or fall with the decline in income; non-OPEC LDC oil consumption would grow, but slowly.

   b. OECD oil consumption would continue to fall (even assuming 2.5% annual real growth). This assumes is no major constraints on construction of coal-fired electric generating plants.

   c. Non-OPEC oil supply would continue to increase at an average annual rate of 0.5 million B/D.

Much of the demand reduction would be in the use of oil for electricity generation.

   a. This use has fallen by around 4 million B/D in the past several years and will fall much further. Coal, nuclear and (to a small extent) hydro and natural gas will substitute for oil.

3. Natural gas is being developed rapidly in much of the world and will replace oil in many industrial and space heating uses.

   a. In the US, around .5-1.0 million B/D of oil equivalent in the form of natural gas is likely to be shifted from electricity generation to industrial and space heating uses by 1990.

   b. Natural gas will be more widely used in Europe, Mexico, Australia, Middle East, and SEAsia among other places.

4. The basic reasons why the demand for oil will continue to fall at a >$30/B real oil price are these:

   a. Only about one-half of all oil used must be in the liquid form; most obviously for transportation, but also for some stationary uses. These uses have a low price elasticity of demand.

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b. But the other half of uses (electricity generation, space heating, industrial processes, feedstocks) on the whole have high price elasticity.

c. Coal (with scrubbers) is widely available in the world at a cost of less than $3 per million BTU ($20/B of oil) for electricity generation. The cost of natural gas is more variable; there is likely to be a good deal available in the $3-6/B range (with the low end applicable near sources.)

5. A sustained >$30/B oil price implies an inexorable shrinkage of the (mainly) non-transport uses of oil. In order for OPEC to maintain such a price, its output would have to shrink progressively through the 1980s.

6. For this not to happen to OPEC, the real price of oil will have to fall, e.g., to $20-25 per barrel. This lower price would stimulate oil demand, especially for industrial uses and discourage additions to supply.

a. If a real price decline is delayed, the long-run consequences for OPEC (indeed for all oil exporters) will be especially serious because more substitute supplies will have been stimulated and more oil-efficient equipment will have been installed. These will not quickly go away when the oil price declines later. The revenue decline for the oil exporters will therefore be deeper and more sustained than if the real price declines soon.

B. Prospects for the Next Year

1. The near-term prospect is consistent with this longer-term projection. Crucial factors are:

a. OPEC discipline

b. timing of the ending of the Iran-Iraq war (or its widening)

c. the strength and duration of the world economic recovery

2. OPEC discipline will be tested severely as demand falls late in the winter. If Iran, Nigeria, Venezuela and Libya continue to produce above quota, demand for Saudi Arabia's oil at $34 per barrel will fall well below 5 million B/D for much of next year; it might even go below 4 million B/D. This would mean Saudi oil and other revenues of under $60 (or even under $50) billion next year.

a. The demand for OPEC oil and NGL will be 19-20 million B/D in 1983, about the same as 1982.

b. Destocking may persist into 1983, especially if the market believes that a price decline is likely.

c. A possible Saudi tactic is to lower the price to e.g., $32 or $30 per barrel in order to persuade the deviant members of OPEC to cut back and let the Saudis produce more.

d. If this tactic works, Saudi revenues would be sustained at, e.g., $70-80 billion per year but those of the OPEC "cheaters" would fall. Even if this tactic works, OPEC in the aggretate would probably see its oil sales shrink at around 3% per year on the average. If the tactic doesn't work, Saudi Arabia would have to cut its output further to hold the price at over $30 per barrel or, alternatively, let the price fall to below $30.

3. If the real oil price does fall soon to the $20-25 per barrel range, the demand for OPEC oil will gradually increase, perhaps to the 1978 level of 32-33 million B/D by 1990. This would restore OPEC oil resources to about the 1982 real level by the late 1980s or 1990.

TWO SCENARIOS FOR WOCA OIL TO 1990

DEMAND

	1978	1982	1990 (>$30/B)	1990 (~$20/B)
Industrial Nations	42	34.5	31	42
OPEC	2.5	3	2	3
Non-OPEC LDCs	7.5	7.5	9	12
	52	45	42	57

SUPPLY

OPEC	32	20	14	33
Non-OPEC	19	23	27	23
CPE Exports	1	1	1	1
TOTAL		52 (+1 inventory change)	44 42	57

MAIN CATEGORIES OF OIL USE IN WOCA

	1978	1982	1990 (>$30/B)	1990 (~$20/B)
Transportation	20	19	20	24
Electricity Gen.	14	10	5	8
Feedstocks	6	5	4	5
Space Heating	6	5	4	6
Ind. & other	7	6	9	14
TOTAL	52	45	42	57